

Serial No. 10/766,856
Amdt. dated September 15, 2005
Reply to Office action of May 18, 2005

- 2 -

Amendments to the Claims:

The following listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1-17. (Canceled)

18. (New) A valve for fluids operating under differential pressure, comprising:

a main valve having a main inlet and a main outlet for fluid;

said main inlet being equipped with a main valve seat over which a main plug is seated, with said main plug being displaceable in an axial direction, perpendicular to a sealing plane;

a control inlet for allowing control fluid to pass to a pressure chamber;

a control outlet for allowing the control fluid to leave said pressure chamber totally or partially;

a secondary control valve to regulate the control fluid in said pressure chamber, said secondary control valve being formed by an axially driven stem made up of a hollow portion and an end portion, where said hollow portion drives the relative displacement between said main plug and said main

Serial No. 10/766,856
Amdt. dated September 15, 2005
Reply to Office action of May 18, 2005

- 3 -

seat, with one of the ends of said end portion being located beyond a body of said valve in order to allow said end portion to be driven from the outside;

said hollow portion is provided with two openings in their corresponding axial end, with said hollow portion being joint in one end to said main plug, with one of said two opening being located in the joint end to said main plug, being surrounded by said pressure chamber, and with another of said two openings being located outside said pressure chamber, from which said hollow portion goes out through an opening of said pressure chamber, being provided with a tight seal which allows axial displacement of said hollow portion; and

said end portion is independent from and is axially aligned with said hollow portion, with one of the ends of said end portion being provided with a portion of said main plug to obstruct said another of said two openings which is located outside said pressure chamber; and

an area corresponding to said control inlet is smaller than an area corresponding to said control outlet, so that the volume of flow through said control inlet is lower than the volume of flow through said control outlet, so that the control fluid may enter through the opening of said hollow portion located in the joint end to said main plug.

Serial No. 10/766,856
Amdt. dated September 15, 2005
Reply to Office action of May 18, 2005

- 4 -

19. (New) A valve for fluids as in claim 18, wherein the control fluid enters said pressure chamber from a duct which communicates with said main inlet.
20. (New) A valve for fluids as in claim 19, where said duct is made up of a small opening in said main plug which communicates with said pressure chamber.
21. (New) A valve for fluids as in claim 18, where said end portion of said stem is joint to said hollow portion of said stem through a joint restricting means to an upper portion of said hollow portion of said stem, so that sliding of said joint restricting means keeps said end portion of said stem within a preset range of axial displacement.